

Ultra-M AutoVNF的重新部署過程

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簡介

本文檔介紹在Ultra-M中重新部署AutoVNF所需的步驟。AutoVNF負責啟動單個虛擬網路功能管理器(VNFM)和虛擬網路功能(VNF)。

預檢查

1.登入到OpenStack Platform Director(OSPD),並在運行狀況報告中驗證虛擬機器(VM)的狀態。

```
[stack@labucs300-ospd ~]$ cat /var/log/cisco/ultram-health/*.report | grep -i xxx

[stack@labucs300-ospd ~]$ cat /var/log/cisco/ultram-health/ultram_health_uas.report
-----
----- VNF-ID/VNFD-ID | UAS Node | Status| Error Info, if any -----
-----
10.10.10.40/LABPGW300-UAS | autovnf | :- ) | LABPGW300-UAS:(alive) | | | labucs300-UAS-LABPGW300-
UAS-core-UAS2-2:(alive) | | | labucs300-UAS-LABPGW300-UAS-core-UAS2-1:(alive)
10.10.10.40/LABPCF300-UAS | autovnf | :- ) | LABPCF300-UAS:(alive) | | | labucs300-UAS-LABPCF300-
UAS-core-UAS1-2:(alive) | | | labucs300-UAS-LABPCF300-UAS-core-UAS1-1:(alive)
10.10.10.45/LABPCF300-UGP | vnf-em | :- ) | LABPCF300-UGP:(alive) | | | LABPCF300-LABPCF300-UGP-
core-EM1-3:(alive) | | | LABPCF300-LABPCF300-UGP-core-EM1-2:(alive) | | | LABPCF300-LABPCF300-
UGP-core-EM1-1:(alive) 10.10.10.45/LABPCF300-ESC | esc | :- ) | LABPCF300-ESC:(alive) | | |
LABPCF300-LABPCF300-ESC-core-ESC1-1:(alive) | | | LABPCF300-LABPCF300-ESC-core-ESC1-2:(alive)
10.10.10.45/LABPCF300-UGP | vnf | :- ) | LABPCF300-UGP:(alive) | | | LABPCF300-LABPCF300-UGP-
core-LABPCF300-CF-VDU-1:(alive) | | | LABPCF300-LABPCF300-UGP-core-LABPCF300-CF-VDU-0:(alive) |
| | LABPCF300-LABPCF300-UGP-core-LABPCF300-SF-VDU-3:(alive) | | | LABPCF300-LABPCF300-UGP-core-
LABPCF300-SF-VDU-2:(alive) | | | LABPCF300-LABPCF300-UGP-core-LABPCF300-SF-VDU-1:(alive) | | |
LABPCF300-LABPCF300-UGP-core-LABPCF300-SF-VDU-0:(alive) | | | LABPCF300-LABPCF300-UGP-core-
LABPCF300-SF-VDU-6:(alive) | | | LABPCF300-LABPCF300-UGP-core-LABPCF300-SF-VDU-5:(alive) | | |
LABPCF300-LABPCF300-UGP-core-LABPCF300-SF-VDU-4:(alive) 10.10.10.48/LABPGW300-UGP | vnf-em | :- )
| LABPGW300-UGP:(alive) | | | LABPGW300-LABPGW300-UGP-core-EM2-2:(alive) | | | LABPGW300-
LABPGW300-UGP-core-EM2-3:(alive) | | | LABPGW300-LABPGW300-UGP-core-EM2-1:(alive)
10.10.10.48/LABPGW300-ESC | esc | :- ) | LABPGW300-ESC:(alive) | | | LABPGW300-LABPGW300-ESC-
core-ESC2-1:(alive) | | | LABPGW300-LABPGW300-ESC-core-ESC2-2:(alive) 10.10.10.48/LABPGW300-UGP
| vnf | :- ) | LABPGW300-UGP:(alive) | | | LABPGW300-LABPGW300-UGP-core-LABPGW300-SF-VDU-
4:(alive) | | | LABPGW300-LABPGW300-UGP-core-LABPGW300-SF-VDU-5:(alive) | | | LABPGW300-
LABPGW300-UGP-core-LABPGW300-SF-VDU-6:(alive) | | | LABPGW300-LABPGW300-UGP-core-LABPGW300-SF-
VDU-0:(alive) | | | LABPGW300-LABPGW300-UGP-core-LABPGW300-SF-VDU-1:(alive) | | | LABPGW300-
LABPGW300-UGP-core-LABPGW300-SF-VDU-2:(alive) | | | LABPGW300-LABPGW300-UGP-core-LABPGW300-SF-
VDU-3:(alive) | | | LABPGW300-LABPGW300-UGP-core-LABPGW300-CF-VDU-0:(alive)
| | | LABPGW300-LABPGW300-UGP-core-LABPGW300-CF-VDU-1:(alive)
-----
```

2. 檢驗AutoVNF狀態。

```
-----
[stack@labucs300-ospd ~]$ source *core
[stack@labucs300-ospd ~]$ nova list | grep LABPGW300-UAS-core-UAS2
| 8608fda4-b763-4753-95ff-2e07852098e3 | labucs300-UAS-LABPGW300-UAS-core-UAS2-1 | ACTIVE | - |
Running | labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.15; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.7
|
| 19f4496c-3907-4ea5-84c9-e5a6ef222392 | labucs300-UAS-LABPGW300-UAS-core-UAS2-2 | ACTIVE | - |
Running | labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.17; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.16

labucs300-UAS-LABPGW300-UAS-core-UAS2-2 -> VNF2-UAS-VIP Primary
labucs300-UAS-LABPGW300-UAS-core-UAS2-1 -> Secondary
```

3. 登入到AutoIT並檢查心跳日誌。

```
ubuntu@labucs300-autoit-2:~$ grep "'restarting'" /var/log/cisco/uas/heartbeat.log
2021-02-22 01:41:42,808 - 192.0.2.15: Notify Event: {'action': 'restart', 'source': 'heartbeat',
'event': 'restarting', 'ip': '192.0.2.15'}
2021-02-22 01:45:42,251 - 192.0.2.15: Notify Event: {'action': 'restart', 'source': 'heartbeat',
'event': 'restarting', 'ip': '192.0.2.15'}
2021-02-23 01:43:36,013 - 192.0.2.15: Notify Event: {'action': 'restart', 'source': 'heartbeat',
'event': 'restarting', 'ip': '192.0.2.15'}
2021-02-23 01:45:55,785 - 192.0.2.15: Notify Event: {'action': 'restart', 'source': 'heartbeat',
'event': 'restarting', 'ip': '192.0.2.15'}
2021-02-24 01:45:19,680 - 192.0.2.15: Notify Event: {'action': 'restart', 'source': 'heartbeat',
'event': 'restarting', 'ip': '192.0.2.15'}
```

```
ubuntu@labucs300-autoit-2:~$ cd /var/log/cisco/uas
ubuntu@labucs300-autoit-2:/var/log/cisco/uas$ grep "Rebooting Instance" uas_USPCHBWorker.log
2019-06-26 18:26:13,088 - Rebooting Instance: 19f4496c-3907-4ea5-84c9-e5a6ef222392
2019-06-29 03:45:12,710 - Rebooting Instance: 19f4496c-3907-4ea5-84c9-e5a6ef222392
2020-07-17 00:46:25,800 - Rebooting Instance: 19f4496c-3907-4ea5-84c9-e5a6ef222392
2020-07-18 00:47:13,347 - Rebooting Instance: 19f4496c-3907-4ea5-84c9-e5a6ef222392
2020-07-18 05:11:11,133 - Rebooting Instance: 19f4496c-3907-4ea5-84c9-e5a6ef222392
2020-07-18 5:16:07,333 - Rebooting Instance: 19f4496c-3907-4ea5-84c9-e5a6ef222392
```

AutoVNF備份

AutoVNF負責啟動單個VNFM和VNF。AutoDeploy將例項化VNFM和VNF所需的配置傳送到AutoVNF，AutoVNF執行此操作。為了啟動VNFM，

AutoVNF直接與VIM/openstack對話，在VNFM啟動後，AutoVNF使用VNFM來啟動VNF。

AutoVNF有1:1冗餘，在UltraM設定中，有2個AutoVNF VM在HA模式下運行。

AutoVNF備份詳細資訊：

- 運行配置
- ConfD CDB DB
- AutoVNF日誌 (來自AutoVNF的每個例項)
- 系統日誌配置

重要事項： 必須在對給定的POD/站點執行任何啟用/停用操作並上傳到備份伺服器之前執行備份。

1.在/opt/uas_baseconfig.txt中的主和輔助AutoIT上，將ha_debug設定為ON。

附註：ha_debug標誌全部為大寫。它可為ON或OFF。

```
ubuntu@labucs300-autoit-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: ON
```

```
ubuntu@labucs300-autoit-1:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: ON
```

2.使用以下命令停止主AutoIT上的AutoIT服務：

```
ssh ubuntu@ < AutoIT Floating IP>
sudo -i
service autoit stop
```

這是為了防止在後續步驟中啟動關閉時AutoIT觸發Ultra自動化服務(UAS)的自動恢復。

```
ubuntu@labucs300-autoit-2:~$ sudo -i
root@labucs300-autoit-2:~#
root@labucs300-autoit-2:~# service autoit status
autoit start/running, process 25001
root@labucs300-autoit-2:~# service autoit stop
```

3.在檔案/opt/uas_baseconfig.txt中，在主要AutoVNF(UAS)和輔助AutoVNF(UAS)上將ha_debug設定為ON。

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: ON
```

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ ssh ubuntu@192.0.2.15
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-1:~$ cat /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
```

```
orch-intf: eth0
profile: AUTOVNF
ha_debug: ON
```

4.從OSPD關閉輔助UAS，並給予讚揚。

```
. corerc ; openstack server stop <VMName>

labucs300-UAS-LABPGW300-UAS-core-UAS2-2 -> VNF2-UAS-VIP Primary
labucs300-UAS-LABPGW300-UAS-core-UAS2-1 -> Secondary

[stack@labucs300-ospd ~]$ nova list | grep LABPGW300-UAS-core-UAS2
| 8608fda4-b763-4753-95ff-2e07852098e3 | labucs300-UAS-LABPGW300-UAS-core-UAS2-1 | ACTIVE | - |
Running | labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.15; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.7
|
| 19f4496c-3907-4ea5-84c9-e5a6ef222392 | labucs300-UAS-LABPGW300-UAS-core-UAS2-2 | ACTIVE | - |
Running | labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.17; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.16

[stack@labucs300-ospd ~]$. corerc ; openstack server stop labucs300-UAS-LABPGW300-UAS-core-UAS2-1
```

5.使用以下命令停止UAS上的uas-confd和autovnf服務：

```
service uas-confd stop
service autovnf stop

ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ sudo -i
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service uas-confd status
uas-confd start/running, process 1305
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service autovnf status
autovnf start/running, process 24208
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service uas-confd stop
uas-confd stop/waiting
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service autovnf stop
autovnf stop/waiting
```

6.備份UAS conf資料庫，然後使用以下命令將其複製到備份伺服器：

```
cd /opt/cisco/usp/uas/confd-latest/var/confd/
tar -cvf <pod>_<VNF>_UAS_cdb_backup.tar cdb/

root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# cd /opt/cisco/usp/uas/confd-latest/var/confd/
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# tar -cvf Autovnf_cdb_backup.tar cdb/
cdb/
cdb/O.cdb
cdb/C.cdb
cdb/aaa_init.xml
cdb/A.cdb
root@labucs300-uas-LABPGW300-uas-core-uas2-2:/opt/cisco/usp/uas/confd-latest/var/confd# ll
Autovnf_cdb_backup_cdb_backup.tar
total 1612
drwxr-xr-x 3 root root 4096 Jan 24 2017 ..
drwxr-xr-x 2 root root 4096 Jan 24 2017 log
drwxr-xr-x 8 root root 4096 Oct 11 11:30 webui
drwxr-xr-x 2 root root 4096 Oct 19 19:18 candidate
drwxr-xr-x 2 root root 4096 Oct 23 13:00 rollback
drwxr-xr-x 2 root root 4096 Oct 28 17:00 cdb
drwxr-xr-x 3 root root 4096 Oct 28 17:00 state
drwxr-xr-x 8 root root 4096 Oct 31 18:00 .
-rw-r--r-- 1 root root 1617920 Oct 31 18:00 Autovnf_cdb_backup.tar
```

7.使用以下命令在UAS上重新啟動uas-confd和autovnf服務：

```
service uas-confd start
service autovnf start
```

```
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service uas-confd start
uas-confd start/running, process 13852
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service autovnf start
autovnf start/running, process 13853
```

8.使用以下命令從OSPD重新啟動輔助UAS:

```
. corerc ; openstack server start <VMName>
```

```
[stack@labucs300-ospd ~]$. corerc ; openstack server start labucs300-UAS-LABPGW300-UAS-core-UAS2-1
```

9.在show UAS命令中驗證主和輔助UAS是否顯示為活動。

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ sudo -i
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# confd_cli -u admin -C
Welcome to the ConfD CLI
admin connected from 127.0.0.1 using console on labucs300-uas-LABPGW300-uas-core-uas2-2
labucs300-uas-LABPGW300-uas-core-uas2-2#show uas
uas version 6.2.0
uas state active
uas external-connection-point 192.0.2.8
INSTANCE IP STATE ROLE
-----
0.0.0.0 error CONFID-Secondary
192.0.2.15 alive CONFID-Secondary
192.0.2.17 alive CONFID-Primary
```

10.在/opt/uas_baseconfig.txt檔案中，將AutoVNF(UAS)主要和次要變更為OFF。

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: OFF
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ ssh ubuntu@192.0.2.15
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-1:~$ cat /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: OFF
```

11.使用service autoit start命令在主AutoIT上重新啟動自動服務。

```
ubuntu@labucs300-autoit-2:~$ sudo -i
root@labucs300-autoit-2:~# service autoit start
```

12.使用show命令檢驗主和輔助AutoIT是否顯示為活動。

```

ubuntu@labucs300-autoit-2:~$ sudo -i
root@labucs300-autoit-2:~# confd_cli -u admin -C
Welcome to the ConfD CLI
admin connected from 127.0.0.1 using console on labucs300-autoit-2
labucs300-autoit-2#show uas
uas version 6.2.0
uas state active
uas external-connection-point 172.16.181.7
INSTANCE IP STATE ROLE
-----
172.16.181.5 alive CONFID-Secondary
172.16.181.8 alive CONFID-Primary

```

13.在/opt/uas_baseconfig.txt檔案中，將Primary AutoIT和Secondary AutoIT上的ha_debug都設為OFF。

```

ubuntu@labucs300-autoit-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: OFF

```

```

ubuntu@labucs300-autoit-1:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: OFF

```

14.從UAS收集日誌並將其傳輸到備份伺服器。

```

root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# cd /opt/cisco/usp/uas/confd-latest/var/confd/
root@labucs300-uas-LABPGW300-uas-core-uas2-2:/opt/cisco/usp/uas/confd-latest/var/confd# cd
/opt/cisco/usp/uas/scripts/
root@labucs300-uas-LABPGW300-uas-core-uas2-2:/opt/cisco/usp/uas/scripts# sudo ./collect-uas-
logs.sh
Dumping output for show transaction in file /tmp/uas-logs/transactions.txt
Dumping output for show log in file /tmp/uas-logs/transactions.txt
Dumping output for show running-config in file /tmp/uas-logs/confd_output.txt
Dumping output for show uas in file /tmp/uas-logs/confd_output.txt
Dumping output for show usp in file /tmp/uas-logs/confd_output.txt
.....

```

15.登入到輔助AutoVNF並重複上一步以收集日誌並將其傳輸到備份伺服器。

16.備份主AutoVNF和輔助AutoVNF虛擬機器上的系統日誌配置，並將其傳輸到備份伺服器。檔案位於以下目錄中：

```
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# ls /etc/rsyslog.d/00-autovnf.conf
/etc/rsyslog.d/00-autovnf.conf
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# ls /etc/rsyslog.conf
/etc/rsyslog.conf
```

17.在主要AutoIT上使用**service autoit start**命令啟用自動服務。

```
ubuntu@labucs300-autoit-2:~$ sudo -i
root@labucs300-autoit-2:~#
root@labucs300-autoit-2:~# service autoit start
autoit start/running, process 25001
```

18.在主要AutoVNF和AutoIT上，在/opt/uas_baseconfig.txt中將ha_debug標誌模式設定為OFF。

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: OFF
```

```
ubuntu@labucs300-autoit-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: OFF
```

19.確認UAS上運行的uas-confd和autovnf服務。

```
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service uas-confd status
uas-confd start/running, process 1305
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service autovnf status
autovnf start/running, process 24208
```

AutoVFN重新部署

1.登入到AutoDeploy並注意UAS例項。

```
ubuntu@labucs300-autodeploy-2:~$ sudo su
root@labucs300-autodeploy-2:/home/ubuntu# confd_cli -u admin -C
Welcome to the ConfD CLI
admin connected from 127.0.0.1 using console on labucs300-autodeploy-2
labucs300-autodeploy-2#show nsr
nsr LABSGW300-instance
nsd LABSGW300
vnfr [ LABPCF300-LABPCF300-ESC LABPCF300-LABPCF300-UGP ]
vnf-package [ usp_6_2_b8 ]
vim-artifact vim_art_rack
nsr LABPGW300-instance
nsd LABPGW300
vnfr [ LABPGW300-LABPGW300-ESC LABPGW300-LABPGW300-UGP ]
vnf-package [ usp_6_2_b8 ]
```

```
vim-artifact vim_art_rack
nsr labucs300-UAS-instance
  nsd          labucs300-UAS
  vnfr        [ labucs300-UAS-LABPCF300-UAS labucs300-UAS-LABPGW300-UAS ]
  vnf-package [ usp_6_2_b8 ]
  vim-artifact vim_art_rack
```

2.使用deactivate nsd-id <nsd-id> vnfd <vnfd-id>命令從自動部署中停用AutoVNF。

```
ubuntu@labucs300-autodeploy-2:~$ /opt/cisco/usp/uas/confd-6.3.1/bin/confd_cli -u admin -C
Welcome to the Confd CLI
admin connected from 10.10.10.10 using ssh on labucs300-autodeploy-2
labucs300-autodeploy-2#nsd:deactivate nsd-id labucs300-UAS vnfd [LABPGW300-UAS]
transaction-id 1560431372-357328
```

3.確認事務處理的狀態。

```
labucs300-autodeploy-2#show transaction
DEPLOYMENT STATUS
TX ID TX TYPE ID TIMESTAMP STATUS DETAIL
```

```
-----
1560431372-357328 activate-ns-deployment labucs300-UAS 2019-06-13T13:09:32.357355-00:00 in-
progress -
1560431372-357328/1560431373-102024 activate-ns-deployment labucs300-UAS 2019-06-
13T13:09:33.102041-00:00 in-progress -
```

4.檢查事務日誌。在本例中，labucs300-UAS事務：1560431372-357328和1560431372-357328/1560431373-102024。

```
labucs300-autodeploy-2#show log 1560431372-357328 | display xml
<config xmlns="http://tail-f.com/ns/config/1.0">
<log xmlns="http://www.cisco.com/usp/nfv/usp-transaction">
<tx-id>1560431372-357328</tx-id>
<log>
2019-06-13 13:09:33,367 - Send Deployment notification for: labucs300-UAS-instance
2019-06-13 13:09:33,375 - Deployment activate-ns-deployment: labucs300-UAS started
2019-06-13 13:09:33,378 - Adding NSR: labucs300-UAS-instance
2019-06-13 13:09:33,385 - Start pipeline of 1 tasks
2019-06-13 13:09:33,390 - Scheduling Task: labucs300-UAS
2019-06-13 13:09:33,400 - Waiting for all workers to finish the transactions
2019-06-13 13:15:00,006 - Deployment activate-ns-deployment: labucs300-UAS succeeded
2019-06-13 13:15:00,020 - Send Deployment notification for: labucs300-UAS-instance
2019-06-13 13:09:33,437 - Send Deployment notification for: labucs300-UAS-instance-deploy
2019-06-13 13:09:33,441 - Deployment activate-ns-deployment: labucs300-UAS started
.....
```

```
labucs300-autodeploy-2#show log 1560431372-357328/1560431373-102024 | display xml
<config xmlns="http://tail-f.com/ns/config/1.0">
<log xmlns="http://www.cisco.com/usp/nfv/usp-transaction">
<tx-id>1560431372-357328/1560431373-102024</tx-id>
<log>
2019-06-13 13:09:33,437 - Send Deployment notification for: labucs300-UAS-instance-deploy
2019-06-13 13:09:33,441 - Deployment activate-ns-deployment: labucs300-UAS started
2019-06-13 13:09:33,446 - Adding NSR: labucs300-UAS-instance, VNFR: labucs300-UAS-LABPCF300-UAS,
vlrs: None
2019-06-13 13:09:33,453 - Adding NSR: labucs300-UAS-instance, VNFR: labucs300-UAS-LABPGW300-UAS,
vlrs: None
2019-06-13 13:09:33,463 - VNF deployment pre-check success(all-not-present)
2019-06-13 13:09:33,472 - VNF-Package deployment pre-check success(all-not-present)
2019-06-13 13:09:33,481 - VIM-Artifact deployment pre-check success
```

```
2019-06-13 13:09:33,487 - Skipping VIM-Orch pre-deployment, since VIM-Orch is not defined
2019-06-13 13:09:33,496 - Skipping VIM pre-deployment, since VIM is not defined
2019-06-13 13:09:33,499 - NS pre-check success
2019-06-13 13:09:33,503 - Copying '/home/ubuntu/usp-6_2_b8.iso' to '/var/cisco/isos/labucs300-
UAS_usp_6_2_b8'
2019-06-13 13:09:53,359 - Updated path to URL 'http://172.16.181.14:5000/isos/labucs300-
UAS_usp_6_2_b8'
```

5. 等待事務完成，並確認狀態。

```
labucs300-autodeploy-2#show transaction
DEPLOYMENT STATUS
TX ID TX TYPE ID TIMESTAMP STATUS DETAIL
-----
-----
1560431372-357328 activate-ns-deployment labucs300-UAS 2019-06-13T13:09:32.357355-00:00 success
-
1560431372-357328/1560431373-102024 activate-ns-deployment labucs300-UAS 2019-06-
13T13:09:33.102041-00:00 success -
```

6. 使用 `activate nsd-id <nsd-id> vnfd <vnfd-id>` 命令從 AutoDeploy 啟用 AutoVNF VNF。D。

```
ubuntu@labucs300-autodeploy-2:~$ /opt/cisco/usp/uas/confd-6.3.1/bin/confd_cli -u admin -C
Welcome to the ConfD CLI
admin connected from 10.253.110.47 using ssh on labucs300-autodeploy-2
labucs300-autodeploy-2#nsd:activate nsd-id labucs300-UAS vnfd [LABPGW300-UAS]
transaction-id 1560431371-357330
```

7. 使用以下命令檢查事務狀態並從事務中收集日誌：

```
show transaction
show log <transaction-id> | display xml
show log <transaction-id> | display xml
```

8. 等到事務完成。 `show transaction` 命令會顯示事務的狀態。

備份還原

1. On Primary AutoIT 在 `/opt/uas_baseconfig.txt` 中將 `ha_debug` 標誌模式設定為 `ON`。

```
ubuntu@labucs300-autoit-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: ON
```

2. 在主 AutoIT 上停止服務自動化。此步驟是為了防止 AutoIT 自動恢復 UAS。

```
ubuntu@labucs300-autoit-2:~$ sudo -i
root@labucs300-autoit-2:~#
root@labucs300-autoit-2:~# service autoit status
autoit start/running, process 25001
root@labucs300-autoit-2:~# service autoit stop
```

3.在主UAS上，在/opt/uas_baseconfig.txt中將ha_debug標誌模式設定為ON。

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: ON
```

4.在輔助UAS上，在/opt/uas_baseconfig.txt中將ha_debug標誌模式設定為ON。

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-1:~$ cat /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: ON
```

5.在OSPD上，使用OpenStack命令停止輔助UAS伺服器。

```
labucs300-UAS-LABPGW300-UAS-core-UAS2-2 -> VNF2-UAS-VIP Primary
labucs300-UAS-LABPGW300-UAS-core-UAS2-1 -> Secondary
```

```
[stack@labucs300-ospd ~]$ corerc ; openstack server stop labucs300-UAS-LABPGW300-UAS-core-UAS2-1
```

6.在主UAS上，停止uas-confd服務。

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ sudo -i
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service uas-confd status
uas-confd start/running, process 1305
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# service uas-confd stop
uas-confd stop/waiting
```

7.在主UAS上，將CDB的備份歸檔檔案複製到目錄/opt/cisco/usp/uas/confd-latest/var/confd/。

```
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# cp Autovnf_cdb_backup.tar to
/opt/cisco/usp/uas/confd-latest/var/confd/
```

8.在主UAS上，刪除CBD目錄下的檔案。

```
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# cd /opt/cisco/usp/uas/confd-latest/var/confd/ ;
rm cdb/*
```

9.在主UAS上，從CDB備份檔案提取檔案。

```
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# cd /opt/cisco/usp/uas/confd-latest/var/confd/ ;
tar -xvf <archive_backup_tar_file>
```

10.在OSPD上使用OpenStack命令重新啟動主UAS。

```
[stack@labucs300-ospd ~]$ source *core
[stack@labucs300-ospd ~]$ nova list | grep LABPGW300-UAS-core-UAS2
| 8608fda4-b763-4753-95ff-2e07852098e3 | labucs300-UAS-LABPGW300-UAS-core-UAS2-1 | ACTIVE | - |
Running | labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.15; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.7
|
| 19f4496c-3907-4ea5-84c9-e5a6ef222392 | labucs300-UAS-LABPGW300-UAS-core-UAS2-2 | ACTIVE | - |
Running | labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.17; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.16

labucs300-UAS-LABPGW300-UAS-core-UAS2-2 -> VNF2-UAS-VIP Primary
labucs300-UAS-LABPGW300-UAS-core-UAS2-1 -> Secondary
```

```
[stack@labucs300-ospd ~]$ nova reboot --hard 19f4496c-3907-4ea5-84c9-e5a6ef222392
Request to reboot server <Server: auto-testautovnf1-uas-2> has been accepted.
```

11. 等待主UAS出現。在重新啟動後檢查主UAS上的UAS狀態。主狀態為活動狀態，而輔助狀態顯示狀態未知。

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ sudo -i
root@labucs300-uas-LABPGW300-uas-core-uas2-2:~# confd_cli -u admin -C
Welcome to the ConfD CLI
admin connected from 127.0.0.1 using console on labucs300-uas-LABPGW300-uas-core-uas2-2
labucs300-uas-LABPGW300-uas-core-uas2-2#show uas
uas version 6.2.0
uas state active
uas external-connection-point 192.0.2.8
INSTANCE IP STATE ROLE
-----
192.0.2.15 unknown CONFID-Secondary
192.0.2.17 alive CONFID-Primary
```

12. 在OSPD上，使用OpenStack命令啟動輔助UAS。

```
[stack@labucs300-ospd ~]$. corerc ; openstack server start labucs300-UAS-LABPGW300-UAS-core-UAS2-1
```

13. 在OSPD上，驗證主和輔助UAS的狀態是否處於活動狀態。

```
[stack@labucs300-ospd ~]$ openstack server list | grep labucs300-UAS-LABPGW300
| 19f4496c-3907-4ea5-84c9-e5a6ef222392 | labucs300-UAS-LABPGW300-UAS-core-UAS2-2 | ACTIVE |
labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.17; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.16 |
labucs300-UAS-usp_6_2_b8-core-uas |
| 8608fda4-b763-4753-95ff-2e07852098e3 | labucs300-UAS-LABPGW300-UAS-core-UAS2-1 | ACTIVE |
labucs300-UAS-LABPGW300-ORCH-NW=192.0.2.15; labucs300-UAS-LABPGW300-MGMT-NW=192.0.2.7 |
labucs300-UAS-usp_6_2_b8-core-uas |
```

14. 在主UAS上，驗證主UAS和輔助UAS的狀態是否處於活動狀態。

```
labucs300-uas-LABPGW300-uas-core-uas2-2#show uas
uas version 6.2.0
uas state active
uas external-connection-point 192.0.2.8
INSTANCE IP STATE ROLE
-----
192.0.2.15 alive CONFID-Secondary
192.0.2.17 alive CONFID-Primary
```

15. 在主AutoIT上啟動自動服務。

```
ubuntu@labucs300-autoit-2:~$ sudo -i
root@labucs300-autoit-2:~# service autoit start
```

16. 驗證主和輔助UAS的安全外殼(SSH)會話保持運行幾分鐘時間。

17. 在主UAS上，將/opt/uas_baseconfig.txt中的ha_debug標誌模式設定為OFF。

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: OFF
```

18. 在輔助UAS上，在/opt/uas_baseconfig.txt中將ha_debug標誌模式設定為OFF。

```
ubuntu@labucs300-uas-LABPGW300-uas-core-uas2-1:~$ cat /opt/uas_baseconfig.txt
ha: true
ha-vip: 192.0.2.8
ha-secret: d5a9fee60ddae4fe357677dcf1320e51
orch-ips: 192.0.2.15,192.0.2.17
orch-intf: eth0
profile: AUTOVNF
ha_debug: OFF
```

19. 在/opt/uas_baseconfig.txt中，在Primary AutoIT上將ha_debug標誌模式設定為OFF。

```
ubuntu@labucs300-autoit-2:~$ vi /opt/uas_baseconfig.txt
ha: true
ha-vip: 172.16.181.7
ha-secret: f99d04acb84807c4c6c6c0eaaad392b5c
orch-ips: 172.16.181.5,172.16.181.8
orch-intf: eth0
prov-ha-vip: 172.16.181.13
prov-intf: eth0
profile: AUTOIT
ha_debug: OFF
```

20. 在AutoVNF上，檢查00-autovnf.conf和rsyslog.conf檔案，然後從以前的備份中還原它們。

```
ubuntu@autoit-tbl-autovnf1-core-avf-1:~#sudo su
root@autoit-tbl-autovnf1-core-avf-1:~#ls /etc/rsyslog.d/00-autovnf.conf
00-autovnf.conf
```

```
root@autoit-tbl-autovnf1-core-avf-1:~#/home/ubuntu#ls /etc/rsyslog.conf
rsyslog.conf
```

後檢查

在OSPD上，檢驗兩個AutoVNF是否均處於活動狀態，並檢查Ultra-M運行狀況檢查報告。

```
[stack@labucs300-ospd ~]$ cat /var/log/cisco/ultram-health/*.report | grep -i xxx
```

```
[stack@labucs300-ospd ~]$ cat /var/log/cisco/ultram-health/ultram_health_uas.report
```